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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

KCX-665 (19232)

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on March 16, 2009

Signature _____

Typed or printed name Sandra S. Perkins

Application Number

10/686,933

Filed

October 16, 2003

First Named Inventor

John Gavin MacDonald

Art Unit

1618

Examiner

Eric E. Silverman

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)
- ☐ attorney or agent of record.
Registration number _____
- ☒ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 58,662

Signature

Ryan P. Harris

Typed or printed name

864-271-1592

Telephone number

March 16, 2009

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT
ATTORNEY DOCKET NO: KCX-665 (19232)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application: MacDonald et al.)	Examiner: Eric E. Silverman
)	
Serial No: 10/686,933)	Group Art Unit: 1618
)	
Filed: October 16, 2003)	Deposit Account No: 04-1403
)	
Confirmation No: 4589)	Customer No: 22827
)	
Title: Method for Reducing Odor Using)	
Colloidal Nanoparticles)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

In conjunction with the filing of a Notice of Appeal, Applicants respectfully request review of the basis of the rejections of the pending claims of the above-captioned application. A Final Office Action dated February 27, 2008 has been issued.

Claims 31, 35-48, and 50-53 are currently pending in the present application, including independent claim 31. Independent claim 31 is directed to a substrate for reducing odor. The substrate is porous and comprises a nonwoven, woven, or paper web. The substrate contains colloidal silica nanoparticles configured to adsorb one or more odorous compounds. The silica nanoparticles have an average size of from about 1 to about 50 nanometers and a surface area of from about 50 to about 1000 square meters per gram. Further, the silica nanoparticles are relatively nonporous and thus have a pore volume of less than about 0.4 milliliters per gram. Without intending to be

limited by theory, the present inventors believe that the solid nature, i.e., low pore volume, of the colloidal nanoparticles may enhance the uniformity and stability of the nanoparticles, without sacrificing its odor adsorption characteristics.

I. **Independent claim 31 is patentable over Honda in view of Takaoka.**

In the Final Office Action, independent claim 31 was rejected under 35 U.S.C. § 103(a) as being unpatentable over EP1188854 to Honda in view of U.S. Patent App. No. 2002/0006425 to Takaoka. Honda is directed to a photocatalyst; specifically, a complex oxide containing titanium and silicon. Honda discloses that the invention's primary function is to decompose malodorous compounds rather than simply adsorb them:

There are also known deodorants which utilize physical adsorption, such as active carbon and silica. **However, with these, the malodorous compounds are adsorbed and not decomposed, so they do not fundamentally resolve the situation.** Ideally, it is necessary that malodorous compounds be completely decomposed to odorless components. Pg. 2, ¶ [0005], ll. 30-32.

Honda gives further reasons why the invention is not configured to only adsorb odorous compounds:

In the case of fibre structures which have been subjected to such deodorant processing, **the adsorbed components may themselves give rise to a bad smell** or the malodorous components may be changed by decomposition into other components which themselves produce a strange smell. Pg. 2, ¶ [0007], ll. 44-46.

Thus, Honda utilizes a photocatalyst in order to decompose odorous compounds.

As correctly noted in the Office Action, Honda fails to disclose Applicants' claimed silica nanoparticles. Nevertheless, in an attempt to render Applicants' claims obvious, the Office Action cites Takaoka as teaching the use of Snowtex-AK silica

nanoparticles. First, Applicants respectfully submit that Takaoa is additionally not “configured to adsorb” odors as claimed by Applicants. Takaoa notes:

In the case of this gas adsorbability, the gas adsorption is physical adsorption and is in thermal equilibrium. Therefore, when the temperature of the carrier is raised by light irradiation, harmful materials adsorbed on the carrier without light irradiation are released and at the same time, **decomposed** by the photoreactive semiconductor supported on the carrier. ¶ [0119]

Thus, like Honda, Takaoa seeks to decompose gaseous compounds rather than adsorb.

Nevertheless, Applicants respectfully submit that the silica particles of Takaoa may not be incorporated into Honda as Honda explicitly **teaches away** from adsorbing odor compounds as claimed by Applicants. As noted above, Honda teaches:

There are also known deodorants which utilize physical adsorption, such as active carbon and silica. **However, with these, the malodorous compounds are adsorbed and not decomposed, so they do not fundamentally resolve the situation.** Ideally, it is necessary that malodorous compounds be completely decomposed to odorless components. Pg. 2, ¶ [0005], ll. 30-32.

Thus, Honda, et al. teaches one of ordinary skill in the art that “deodorants . . . such as . . . silica” are not desired as they do not decompose as required. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. Furthermore, a “prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” M.P.E.P. § 2141.02.

In response to these arguments, the Office Action states, “Applicants’ remarks are based on the faulty premise that decomposition of odorous compounds and

adsorption of such compounds are mutually exclusive. . . properly understood, what Honda teaches away from is not adsorption per se, but adsorption without decomposition.” Even if the Examiner’s statements were true, the Office Action admits that Honda teaches away from combining with Takaoa in such a manner. The Office Action notes, “it would be obvious here to replace Honda’s particles with the Snowtex-AK of Takaoa, as both are recognized as odor adsorbing agents.” However, if the photocatalyst of Honda were replaced by Snowtex-AK disclosed in Takaoa, the ability to decompose the malodorous compound is lost. Thus, replacement of the photocatalyst with an odor adsorber as claimed by Applicants is explicitly taught against as noted in paragraph 5 of Honda reproduced above.

II. Dependent claims 35-48, and 50-53 are patentable

Dependent claims 44, 45, 46, 51, and 52 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Honda and Takaoa in view of WO 03/025067 to Beaverton. Applicants submit that Beaverton does not remedy the limitations of Honda and Takaoa as discussed above relating to independent claim 31. Thus, for at least the reasons indicated above relating to independent claim 31, Applicants submit that dependent claims 44, 45, 46, 51, and 52 patentably define over Honda and Takaoa in view of Beaverton.

Dependent claim 47 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Honda and Takaoa in view of U.S. 5,762,643 to Ray. Applicants submit that Ray does not remedy the limitations of Honda and Takaoa as discussed above relating to independent claim 31. Thus, for at least the reasons indicated above

relating to independent claim 31, Applicants submit that dependent claim 47 patentably defines over Honda and Takaoa in view of Ray.

In addition to the rejection noted above, various claims were also provisionally rejected under the judicially created doctrine of obvious-type double patenting in view of pending U.S. Application Serial No. 10/686,938. Additionally, claims 31, 43, 49, and 50 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-35 of U.S. Patent No. 7,141,518. To the extent necessary, Applicants agree to submit terminal disclaimers for both references at such time that the application is otherwise in condition for allowance.

Applicants respectfully submit that the present application is in complete condition for allowance and favorable action, therefore, is respectfully requested. Examiner Silverman is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this Pre-Appeal Brief Request for Review.

Please charge any additional fees required by this Pre-Appeal Brief Request for Review to Deposit Account No. 04-1403.

Respectfully requested,

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